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**Title: Brief Intervention for substance misuse during a mental health admission**


## Abstract

*Article classification: General review*

**Purpose:** To provide a summary of the principles, theories and basic components of a recently developed brief integrated motivational intervention (BIMI) for working with individuals experience co-ccurring severe mental health and substance use problems in inpatient settings, including the outcomes of a feasiblity randomised controlled trial (RCT).

**Background:** There are greater financial costs and a negative impact on functioning associated with psychiatric admissions for people who experience co-occurring severe mental heath and substance misuse problems. In addition, their engagement in treatment is often problematic.

**Methodology:** The BIMI described was evaluated via a feasibility RCT that assessed whether the opportunity to discuss use of substances whilst on an inpatient ward represented an opportunity to engage inpatients in thinking about their use and the impact it has on their mental health.

**Intervention:** The BIMI is delivered in short burst sessions of 15-30 minutes over a two-week period adopting a simple 3-step approach that can be delivered by routine ward staff. It incorporates an assessment of substance use, mental health and motivation followed by personalised feedback, a focus on increasing awareness of the impact on mental health and the development of goals and a change plan.

**Findings:** The intervention has been shown to lead to higher levels of engagement in clients exploration of alcohol and drug use and the impact on mental health. Findings suggest both staff and inpatients found the intervention feasible and acceptable.


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**Originality:** Routine ward staff were trained to deliver a brief intervention to inpatients during an acute hospital admission.

**Keywords: randomised controlled trial; hospital admission; dual diagnosis; schizophrenia; substance misuse; CBT**

This overview aims to provide a summary of a recently developed brief integrated motivational intervention (BIMI) for working with individuals experience co-ccurring severe mental health and substance use problems; the paper brief describes the theoretical framework and outlines the feasiblity randomised controlled trial (RCT) conducted to evaluate the approach. For more information on the feasibility RCT please see Graham et al. (2016) and Graham et al. (Under Review); the treatment approach will be published in manualised form (Graham et al., In Press).

**Hospital Admissions: a Window of opportunity?**

In considering the individuals admitted into mental health hospitals, 22-44% are suggsted to also have co-ocurring alcohol or drug problems (DoH, 2006). Such co-ocurring problems are often associated with increased psychiatric hospital admissions (e.g. Lai, 2012) and can impact negatively on the delivery of treatment and management of care during inpatient stays (DoH, 2006). Given the financial costs and negative impact on functioning associated with psychiatric admissions it is worth asking the question, “have opportunities been missed?”. Admission to a psychiatric hospital has been suggested to present a “natural window of opportunity” (Graham et al., 2016 p.5) to engage this client group, a chance for inpatient staff to start a conversation with inpatients about other health-related concerns



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(e.g. drug and alcohol use) that may have indirectly contributed to their admission. It has been suggested that the period during which acute mental health symptoms begin to decline represents a time of contemplation, of increased awareness and insight into factors that contributed to becoming mentally unwell and/or being admitted to hospital (Rosenthal, 2003; Blow et al., 2010; Graham et al., 2015). When clients that use substance problematically admitted to hospital the situation may present a "teachable moment", as has been found in general hospital and emergency department settings (e.g. Lau, et al. 2010; Buchbinder et al., 2014). If given the opportunity to speak about their use of alcohol and/or drugs whilst on the ward, it is suggested inpatients may be open to thinking about their use and the impact it has on their mental health.

The importance of targetting this time period clinically is highlighted by research distinguishing two contrasting conceptual styles of recovery from mental health relapses. 'Integration', is hypothesised to be an acknowledgement of, openness and attempt to cope with the mental health problem, whereas 'Sealing-over' is characterised by cognitive and behavioural attempts to avoid the diagnosis and experience of mental health problems in an attempt to reduce emotional distress (Tait et al., 2003). That is, individuals may deny or minimize recent mental health symptoms or experiences and precipitating factors, and as a result, lose awareness of the triggers for becoming unwell (Tait et al., 2003). A *Sealing over* recovery style has been found to predict low engagement with mental health services six months after discharge from a psychiatric hospital (Tait et al., 2003). This coupled with the poor engagement in treatment (Maslin, 2003; Mueser et al., 1992; DoH, 2002) and low motivation to change (McHugo, 1995; Carey, 1996; Swanson et al., 1999) suggested among those who experience severe mental health problems and use substances problematically,



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means engagement becomes a key hurdle for change and positive treatment outcomes (Mueser et al., 1992; Swanson et al., 1999; Drake et al., 2001; Mueser, 2003).

**Brief Integrated Motivational Intervention (BIMI)**

A number of interventions have been developed that specifically focus on working with individuals experiencing mental health difficulties that use alcohol and/or drugs as part of an inpatient admission (e.g. Baker et al., 2002; Kavannagh et al., 2004; Bagoien et al., 2013). A recent Cochrane review (Hunt et al., 2013) of 32 RCTs, including a number of motivational interventions and combined cognitive behavioural and motivational interventions developed for use with individual experiencing co-occurring mental health and substance use problems in inpatient settings (e.g. Swanson et al., 1999; Baker et al., 2002), concluded that the available evidence does not recommend any one psychosocial approach for working with this client group. The authors suggest the evaluation of brief interventions e.g. motivational interviewing could present an opportunity to identify "cost-effective and easy to implement components that can be quickly integrated into standard care" (p.62).

In line with this, a BIMI (Graham, Copello, Birchwood & Griffith, In Press) was specifically developed for use with this client group. The BIMI is grounded in the Cognitive Model of Substance Abuse (Beck et al., 1993), Motivational Interviewing (e.g. Hettem, Steele & Miller, 2005) and draws on the first two phases of the integrated treatment approach, Cognitive-Behavioural Intergated Treatment (C-BIT; Graham et al., 2004). The first two phases of C-BIT focus on engaging and working with individuals in the precontemplation and contemplation stages of change, as outlined in the spiral of change (Prochaska, DiClementi and Norcoss, 1992). The approach combines cognitive behavioural and motivational techniques for



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working with these stages of change. The approach reflects the research evidence on using brief motivational approaches to increase engagement and motivate behaviour change in those with co-morbid mental health and substance misuse (Swanson, Pantalon & Cohen, 1999; Baker et al., 2002; Martino, 2007; Graber, Moyers & Griffith et al., 2003; Kavanagh, Young & White et al., 2004; Carey et al., 2002).

**An overview of the BIMI**

In helping clients consider the impact of substance use on their mental health by engaging with them during the opportunity for engagement that admission is suggested to provide, the BIMI aims to help clinicians maximise this "teachable moment". The BIMI provides clinicians with a brief, structured, personalised treatment approach that enables them to start engaging clients who may not be motivated to talk about their substance use; using questionnaire results and psychoeducational information that is specifically tailored to the client's individual needs. It is designed for use by clinicians as part of routine practice over a two week period via 'short burst' sessions of 15-30 minutes, to a maximum of 1 to 6 sessions (Graham et al., In Press). The BIMI really encourages clinicians to adopt a conversational style with the aim of building good collaborative relationships with clients so that they can work toward a joint goal of 'keeping clients from returning to hospital' or reducing risks of mental health relapse (Graham et al., In Press).

*Basic Components*

The BIMI approach uses a simple 3-step framework (see Graham, Copello, Birchwood & Griffith, In Press for a fuller description ). The initial step (STEP 1) involves the clinician



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completing a brief questionnaire-based assessment, in a collaborative style with the client. This assessment comprises of standardised measures and is followed up in the second session with the clinician providing a personalised feedback statement of the results. The basic idea underpinning this is to raise the clients awareness of their use and its potential impact and to increase engagement in discussing substance use. The assessment is completed within the context of the broader clinical and risk assessments and information gathering, and assesses: the pattern and severity of alcohol and drug use over the past 30 days; motivation to change; and mental health symptoms. The feedback details the clients substance use in light of financial costs and national health guidelines and highlights potential impacts on health and mental health. The client is also provided with individually tailored psychoeducational material/leaflets about the substance(s) they are using.

The second step (STEP 2) utilises the awareness and reflection that will have emerged following the assessment feedback to help clients come to a point where they are able to consider and make decisions about what outcomes/goals they want. The strategies used aim to increase awareness of the perceived "benefits" of use and reflection on the "costs" associated with continued substance misuse; including consideration of the clients greatest concern when reviewing the costs of using (Graham et a., In Press). In considering this with clients, a worksheet is used (Graham et al., in press) to facilitate and record the in-session discussion ("Worksheet 2: What I enjoy about using or what keeps me using" (Graham et al., In Press). Throughout Step 2, clients are encouraged to "take a second look" at how they have typically viewed the substance they use and to re-evaluate these positive thoughts and beliefs about their substance use that tend to promote continued problematic use. A reflective and collaborative approach enables clinicians to start helping the client consider



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the impact of their substance use on their mental health. Furthermore, to become aware of the possibility that continued use may interact negatively with mental health at times, by drawing out a cognitive behavioural maintenance/vicious cycle. This cycle provides a diagramatic representation for the client to see the links between triggers, thoughts, mood/mental health, behaviours (including substance use) and the consequences associated with using and is used to facilitate an understanding of the relationship between mental health and substance use. Clients are encouraged to begin to reflect on steps they could take to help them exit this maintenance cycle or goals they would like to acheive that their current substance use maybe impacting on.

The third step (STEP 3) encourages clients to contemplate change and develop a change plan based on the self-identified goals discussed and developed during STEP 2. This step aims to enable change to feel possible and achievable by adopting a practical approach and working through any issues that may hinder the client from moving toward their goal. Included in STEP 3 are practical strategies to cope with: setbacks to achieving their goal; cravings and urges and how best to develop social support network that are more likely to support the clients goal.

Not all the steps in the BIMI need to be delivered to all clients. The essential STEP is STEP 1. The main idea is to collaboratively engage clients in the step suitable for them so that they can meaningfully talk about and re-evaluate their alcohol or drug use. If necessary, and the setting allows, a 'booster session' can be offered one month after the last session to help consolidate motivation. This session focuses on reviewing with clients their motivational statements about their substance use, the decisions they made and progress on goals



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identified. During booster sessions, the clinician works with clients to ensure that clients have the practical skills and strategies in place to be able to progress toward their goals. This session is also an opportunity to link clients with community-based longer-term help to address their substance use.

**Overview of the feasibility and acceptability of a Brief Intervention in inpatient settings**

A feasibility RCT has been conducted that explored whether a psychiatric hospital admission does actually represent a natural window of opportunity for people who misuse drugs or alcohol to be routinely offered treatment that aims to re-evaluate their use and help them become aware of negative impacts on mental health (Graham et al., 2014; Graham et al., 2015). The aim was to consider the feasibility and acceptability of using a brief integrated motivational intervention (BIMI) (Graham et al., 2014; Graham et al., 2015; Graham et al., In Press) on inpatient units.

**Overview of the Feasibility Randomised Controlled Trial**

Participants were new admissions to one of six mental health inpatient units (11 acute and 3 Psychiatric Intensive Care wards) recruited in line with the inclusion criteria (Graham et al., 2016).

Fifty nine inpatients (50 male; 9 female) consented to participate, 30 were randomised to receive the BIMI plus standard ward care and 29 to 'Standard' ward care. Questionnaires were completed at baseline, post intervention and at 3 month follow up, when participants who received the BIMI were also invited to complete a qualitative interview. In addition to questionnaires completed for the cost effectiveness evaluation, the questionnaires



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completed as part of the feasibility RCT were, the *Substance Abuse Treatment Scale* (SATS) (Drake et a;., 1996) and *Clinicians Alcohol/Drugs Use rating scales* (CDUS/CAUS) (Drake et al., 1996) completed by Care Coordinators, the *Maudsley Addiction Profile* (MAP; Marsden et al., 1998), *Alcohol Use Disorders Identification Test* AUDIT (Saunders et al., 1993), Severity of dependence scale (Gossop et al., 1995) the SOCRATES (Miller et al., 1996), Importance-confidence ruler (Miller et al., 1997), Recovery Style Questionnaire (RSQ; Birchwood et al., 1994) and the HADS (Zigmond & Snaith., 1983).

Participants in the BIMI group were offered up to 6 sessions, with Inpatient staff & staff from a specialist 'dual diagnosis' team over a 2 weeks period. Participants were also seen a month later at home, if discharged from hospital, in conjunction with their Community Care Coordinator to remind them of changes they had made and the information covered in the sessions. The average age of inpatients who participated was 38.6 years, with a diagnosis of Schizophrenia or schizoaffective disorder diagnosis (41/59), mainly misusing cannabis (27/59) or alcohol (23/59); 50 participants were followed-up at 3-months.

Twenty seven staff from all wards and six specialist staff were trained to deliver the intervention. Inpatient staff were training to deliver the BIMI over two days prior to the randomisation of any participants into the trial by two of the authors (HG and EG). The training was open to all ward staff working clinically. Staff from the COMPASS (Combined Substance Use and Psychosis) Programme who typically delivered the intervention jointly with a member of inpatient staff also received training.

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Of the staff trained, 12 inpatient and 5 specialist staff delivered the BIMI. Of the 30 inpatients randomised to receive the BIMI, 21 (70%) actually received the intervention. On average these particpants received 3 sessions of the BIMI(ranged 1-5 sessions). The average length of a session was 18 minutes, and the total intervention time was approximately 57 minutes. The key finding after 3-months was a statistically significant improvement in engagement with mental health Care Coordinators to change drug or alcohol use and access treatment. There was no evidence of an effect of randomised treatment on the number of days using the primary substance, however, in supportive analysis the amount of substance use was explored. There was more abstinence for those that received the BIMI (38.4%) compared to those that did not (20.8%). Both groups similarly reduced the number of days using their main substance, by more than half. The number of substances used by both groups reduced from between 1 to 4 substances to 0 to 2. The brief intervention was relatively low cost at £72 and there were no significant differences between the service use costs for the BIMI group when compared to the 'standard' ward care group.

Qualitative interviews with Inpatient staff and participants revealed that staff found the short burst and targeted style of the BIMI a useful approach to engage inpatients in a discussion about drug and alcohol use. Similarly, participants found the intervention helpful, giving them an opportunity to talk to the inpatient staff. Some non-specific factors of the BIMI such as staff giving time and "going out of their way" to meet with them were perceived as helpful by participants giving them a sense that they were valued (Graham et al. Under Review). A number of specific factors of the BIMI; personally tailoring the feedback of the information gathered during the assessment, focussing on the perceived "benefits", harms/costs and impact on mental health associated with their use, as well as



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developing new coping strategies and techniques appeared to promote motivation and change (Graham et al., 2015; Graham et al., Under Review).

**Clinical Implications and Implementation**

During the qualitative interviews with Inpatient staff and participants following the feasibility RCT (Graham et al., 2016), staff reported that the style of the BIMI was a useful approach to engage inpatients in a discussion about substance use (Graham et al., In preparation; Graham et al., 2015). The clinical implications identified suggest the BIMI to be a useful starting point to engage this client group and that, whilst evaluated for use in inpatient settings, it is suggested that the BIMI could be used in a number of other settings, especially when a 'teachable' moment' presents itself such as during lapses or relapses in mental health or when acute symptoms are appearing. Such settings could include crisis, home treatment, out-patient and community mental health treatment settings.

The RCT highlighted implementation issues that would be important to consider in future implementaion of the BIMI; namely, the therapeutic environment of inpatient units and whether clinicians perceive they have designated time and authorisation to deliver the intervention in that setting. Challenges experienced in providing a BIMI within an inpatient unit include the provision of training and supervision to staff, the dynamic nature of the units and the accommodating of this work within the busy roles of staff work on the units; robust training in a targeted manualised brief intervention, access to regular supervision throughout, the support of the COMPASS team and close working with the management and staff teams on the units were all important in facilitating the completion of the research with clients.



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The results of the feasibility RCT suggest that the timing of the delivery of the intervention during an inpatient admission is also an important consideration for some inpatients on acute wards, to ensure that the initial acute symptoms have stabilised sufficiently for clients to have the "headspace" to be able to engage in the BIMI (Graham et al., Under Review). Engaging inpatients in the BIMI during a hospital admission can promote inpatients experience of feeling valued, which may improve longer term therapeutic engagement. The authors suggest that clinicians benefit from adopting an open, non-judgemental, compassionate, accurate communication style in delivering the personalised assessment feedback and intervention, as it appears to promote greater reflection and engagement. Inpatients reported feeling put off the intervention by the opposite approach (Graham et al., Under Review; Graham et al., 2015).

In terms of the implications for research, the authors suggest that research is now required that builds on the feasibility RCT completed and then considers the use of the BIMI approach via a effectiveness RCT. On a wider level as suggested by Hunt et al. (2013), further research is now required that evaluates the use of brief interventions with this client group via robust RCT's to add to the evidence base in this area.

**Conclusions**

Overall, the authors exerience of development, delivery and preliminary testing of the BIMI intervention in a feasibility trial suggests that the approach offers a realtively simple, opportunistic and evidence based intervention, that can be delivered by staff in busy in-patient units with relatively straightforward training and supervision support. The intervention aims to maximise the use of the period termed a 'window of opportunity',



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during which clients are suggested to be more open to exploring their use of alcohol and/or drugs and has been shown to lead to higher levels of engagement in clients' exploration of alcohol and drug use and impacts on mental health A number of clinical implications and implementation issues have been identified on completion of the feasibility RCT. Further research is now required that considers this and builds on the initial research evaluating the approach.

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